FINAL REPORT

GAMBLING AND PROBLEM GAMBLING IN SASKATCHEWAN

JANUARY 2002

Prepared by:
Harold J. Wynne, Ph.D.
Canadian Centre on Substance Abuse
Ottawa, Ontario

TABLE OF CONTENTS

LIST OF TABLES

EXECUTIVE SUMMARY

Introduction

In 1993, the Government of Saskatchewan established the Minister's Advisory Committee on the Social Impacts of Gaming. One of the Committee's main initiatives was to conduct a province-wide survey to provide baseline data on gaming participation rates and the current prevalence of problem gambling. In 1994, the completed study was presented to the Ministers responsible for Health and the Saskatchewan Liquor and Gaming Authority and the study results and recommendations from the Committee helped shape the Saskatchewan government policy response to gaming and problem gambling.

In 1998, the Saskatchewan government planned to replicate the provincial gambling study to determine if gaming participation and problem gambling prevalence rates had changed over the previous five years. However, at that time, there was growing concern amongst Canadian provinces that a new approach and measurement instrument was needed to guide problem gambling prevalence studies in the general population. Consequently, rather than conducting a five-year replication study that relied on dated methods, the Saskatchewan government chose to collaborate with the other provinces in developing a new survey instrument—the Canadian Problem Gambling Index (CPGI).

In 2001, the CPGI was finally validated for use in Canadian problem gambling prevalence research, and Saskatchewan became the first province to apply this new instrument in a province-wide survey. This report presents the findings from this research.

Research Design

The research design is a descriptive telephone survey of a random sample of 1,848 Saskatchewan adults 19 years-of-age and older. A survey questionnaire based on the new Canadian Problem Gambling Index (CPGI) guided the telephone interviews, and the survey achieved a 60% response rate, with results for the sample being accurate within ±2.3% nineteen times out of twenty.

The CPGI identifies four sub-types of gamblers, namely those who (1) have no problems with their gambling, (2) are at low risk for developing a problem, (3) are at moderate risk, or (4) have a serious gambling problem.

In research, this convention of classifying and labeling gambler sub-types helps researchers, clinicians, and program specialists identify and describe people who have a gambling problem or are at-risk for developing one. Unfortunately, the labels themselves can isolate and stigmatize the person with a gambling problem. There are numerous examples in health research where labels have ostracized the afflicted within societies (e.g., leper, addict, alcoholic, schizophrenic, AIDS victim), thus adding to the individual's torment. While this study uses conventional labels including "at-risk gambler" and "problem gambler," it must be stressed that the focus should be on the problem gambling behaviour, and not on the individual. This is a very important distinction that can help focus public health discussion and communication on the issue of problem gambling behaviour, rather than on problem gamblers, thus mitigating the potential harmful effect the problem gambling label may have for the individual.

Gambling in Saskatchewan

Gambling in Saskatchewan is clearly a very popular recreational and entertainment pastime as it is practiced in some form by 87% of the adult population throughout the province. Opportunities to gamble are ubiquitous, existing in legalized and provincially regulated venues (e.g., casinos, race tracks, bingo halls); private licensed premises (e.g., VLTs); shopping malls and convenience stores (e.g., lottery tickets, Sport Select); the family environment (e.g., card/board games), illegal gambling establishments (e.g., unregulated card rooms); the workplace (e.g., sports pools) and literally in the home, through the advent of Internet access to on-line gambling sites. Gambling in virtually every form is easily accessible to both urban and rural Saskatchewan residents, and study findings show that both groups take advantage of gambling opportunities that are available.

Key Findings

- 87% of Saskatchewan adults have gambled on at least one activity in the past year.
- Saskatchewan gamblers are as likely to reside in small towns/rural communities (85%) as in small cities, Regina, and Saskatoon (87%).
- Men (87%) and women (87%) are equally likely to be gamblers.
- Young adults age 25 to 30 (93%) are most likely to be gamblers, while senior citizens 65 and older (79%) are least likely.
- Those with an annual household income of less than $20,000 (78%) are least likely to have gambled in the past year.
- Saskatchewan adults are most likely to purchase raffle/fund raising (63.7%) and lottery (62.6%) tickets as their most preferred form of gambling. These are the only gambling activities that are engaged in by the majority of Saskatchewan gamblers.
- The next most preferred gambling activity is the purchase of instant win or scratch tickets (27.5%), followed by gambling on coin slot machines at casinos (20.3%) and on VLTs in bars or lounges (17.7%).
- Most Saskatchewan gamblers do not engage in any type of gambling activity on a weekly basis. The most prevalent weekly gambling activities are lottery ticket purchases (34.2%), bingo (23.9%), and playing Sport Select (23.5%).
- Saskatchewan gamblers spend the most per month wagering on the following games: bingo ($20), casino table games ($20), coin slots ($17.50), VLTs ($15), and games of skill ($15).

Implications

A policy question that faces all jurisdictions in North America is, "How much gambling is enough?" To address this policy question, it is advisable for all governments to examine the socio-economic costs and benefits of future gambling expansion.

Problem Gambling in Saskatchewan

In this survey, Saskatchewan gamblers are classified into five sub-types, and the prevalence rates for each of these is as follows:

- Non gamblers (13.4%)
- Non-problem gamblers (71.4%)
- Low risk gamblers (9.3%)

- Moderate risk gamblers (4.7%)
- Problem gamblers (1.2%)

Based on these rates, it is estimated that between 87,800 and 122,200 adults in Saskatchewan are at risk for developing a gambling problem, and an additional 5,600 to 13,200 already have a serious gambling problem. At-risk and problem gamblers may be found in both urban and rural communities across the province, although residents in Regina and Saskatoon appear to be somewhat more at-risk, or to already be experiencing a serious gambling problem.

Key Findings

Demographics

- Males are more likely than females to have a gambling problem (1.6% vs. 1.3%) or to be at low or moderate risk for developing a problem (20.7% vs. 11.8%).

- The youngest age group (19-24 years) is most likely to experience a gambling problem (2.4%) or to be at-risk for developing a problem (28.8%).

- In contrast, gamblers 70 years and older are less likely to be at-risk for developing a gambling problem (12.4%) and none presently score as having a problem.

- Married gamblers are less likely than single gamblers to have a gambling problem (0.8% vs. 2.3%) or to be at-risk (11.8% vs. 24.6%) for developing one.

- Gamblers who have not gone beyond a high school education are at greater risk than those with a post-secondary education for developing a gambling problem (20.2% vs. 12.3%) or to already have a problem (2.4% vs. 0.6%).

- Gamblers with the lowest annual household income of <$20,000.00 (22.1%) are at the greatest risk for developing a gambling problem. Furthermore, these low-income gamblers (4.3%) are more likely than those in higher income groups to score as problem gamblers.

- Aboriginal gamblers are significantly more likely than gamblers in other ethnic groups to be both at-risk for developing a gambling problem (34.7%) and to presently score as problem gamblers (12%).

- In the survey sample of 1848 adults, there are reportedly 22 minors living in households where the respondent is a problem gambler and a further 192 living in a home where the respondent is at-risk for developing a gambling problem.

- The unemployed are more likely than those who are employed to be at-risk for developing a gambling problem (26.2% vs. 15.8%) or to already be problem gamblers (7.1% vs. 1.1%).

Gambling Activities

- Problem and at-risk gamblers are more likely than non-problem gamblers to gamble on every type of activity, with the exception of purchasing raffle tickets, Internet gambling, and wagering on sports with a bookie (very few respondents gamble on these latter two activities).

- The greatest difference between problem and non-problem gambler is for the following games: VLTs (78.3% vs. 14.8%), instant win tickets (78.3% vs. 27.7%), bingo (47.8% vs. 7.5%), coin slots (47.8% vs. 19.5%).

- Problem and at-risk gamblers are more likely than non-problem gamblers to (1) wager weekly on every form of gambling activity; (2) wager for longer durations of time per gambling session, and (3) bet substantially more money each month on all forms of gambling. The exception is for purchasing raffle and fund-raising tickets, where there is little difference amongst the gambler sub-types.

- Problem gamblers (61.1%) are more likely than non-problem gamblers (6.1%) to play VLTs weekly or more frequently.

- Problem gamblers are more likely than non-problem gamblers to spend three or more hours/session at the following games: cards/board games with family or friends (66.7% vs. 37%); coin slots (45.5% vs. 8%); VLTs (44.4% vs. 1.1%).

- Problem gamblers are more likely than non-problem gamblers to spend more each month on the following gambling activities: horse races ($400 vs. $5); VLTs ($200 vs. $10), coin slots ($200 vs. $10), bingo ($160 vs. $15.50).

Motivation

- Most gamblers are motivated to wager for three main reasons, namely (1) to win money, (2) for fun and entertainment, and (3) to support worthy causes. Problem and at-risk gamblers are most likely to endorse the former two reasons, and non-problem gamblers the latter.

- Problem gamblers are the most likely to gamble alone, and the least likely to gamble with their spouse or partner. At-risk gamblers are the most likely to gamble with friends or co-workers.

Problem gambling behaviour

- In terms of their gambling behaviour, problem and at-risk gamblers in Saskatchewan are more likely than non-problem gamblers to:

    - bet more than they can afford to lose and to bet more than they intend.
    - increase wagers to maintain a heightened level of excitement.
    - chase their gambling loses by returning another day to win back their money.
    - borrow money to finance their gambling.
    - lie to family members about their gambling and hide evidence that they have been gambling.
    - gamble to escape personal problems.

Consequences

- As a result of this uncontrolled gambling behaviour, problem and at-risk gamblers are more likely than non-problem gamblers to suffer adverse personal and social consequences, including:

    - having people criticize their gambling behaviour.
    - experiencing feelings of guilt.
    - experiencing negative financial consequences, including receiving social assistance and food from the food bank and not paying household bills.
    - having problems, including getting in serious arguments and physical attacks with family members or friends.
    - having lost or nearly lost a relationship (including being separated or divorced), job, or

education/career opportunity as a result of uncontrolled gambling.

Health Status

- Problem and at-risk gamblers are more likely than non-problem gamblers to experience the following health-related problems:
    - psychological conditions, including emotional illness, stress, anxiety, and depression.
    - irritability and restlessness, including difficulty sleeping.
    - learning disabilities.
    - suicide ideation
    - problems with alcohol, including weekly or more frequent drinking and consuming more drinks per occasion.
    - weekly or more frequent illegal drug use.

Problem recognition

- Most Saskatchewan problem gamblers are aware that they may have a gambling problem, and most want to stop gambling. Many have tried to do so unsuccessfully. Furthermore, problem gamblers are more likely to recognize that another family member also has a gambling problem.

Implications

Problem gambling clearly afflicts a relatively small percentage (<2%) of the Saskatchewan population; however, there is a much larger percentage (14%) of adults who are at some level of risk for developing a problem. While these percentages seem small, especially when compared with the 70% of residents who enjoy gambling without experiencing any problems, they are nonetheless very significant when translated into the estimated number of people who have a problem, or are in danger of developing one. So long as there is provincially sanctioned gambling in Saskatchewan, there must be a corresponding major governmental initiative to reduce the harm this causes for some residents

Gambling Changes in Saskatchewan

In both the 1993 and 2001 surveys, an identical number of Saskatchewan adults (87%) report having gambling on at least one activity in the past 12 months.

Since the 1993 provincial gambling survey, there have been some changes in the types of gambling activities engaged in by Saskatchewan residents, including decreased participation in some activities (i.e., lotteries, sports pools, bets with friends, bingo, Sport Select, and horse races) and increased participation in others (i.e., raffles and VLTs). Monthly expenditures on all activities are greater in 2001 than 1993, with the largest monthly expenditure in both years being for bingo, and the greatest discrepancy being a three-fold increase for VLT play.

Key Findings

- In the 1993 and 2001 surveys, the top ranked gambling activities were purchasing lottery (74% vs. 63%) and raffle tickets (57% vs. 64%).

- In 2001, fewer Saskatchewan gamblers report wagering on all other gambling activities; with the exception of VLTs, where there is a slight increase over the past eight years (16% to 18%).

- For every gambling activity, Saskatchewan gamblers in 2001 report

spending more per month than did gamblers in 1993.

- For games included in both studies, the largest monthly expenditure in each is for bingo (1993, $13.50; 2001, $20), and the largest difference is for VLT play (1993, $5; 2001, $15).

- It is not possible to directly compare statistical changes in problem gambling prevalence rates and findings between the first prevalence study done in 1993 and the present study, as different research methods and screening instruments (i.e., CPGI vs. SOGS) are utilized in each.

Implications

Comparisons between the 1993 and 2001 studies are limited, which demonstrates the need for a more sophisticated, longitudinal monitoring of gambling participation and expenditure rates for the entire inter-related constellation of gambling activities in Saskatchewan. This information will be valuable in advising policy decisions to expand, contract, or otherwise enhance/modify legalized gambling formats.

CHAPTER I

INTRODUCTION

In 1993, the Saskatchewan government undertook a study to describe citizens' gambling involvement and to determine the prevalence of problem gambling in the adult population (Minister's Advisory committee on the Social Impacts of Gaming, October, 1994). In the present study, the provincial government wishes to once again examine Saskatchewan adults' gambling practices, the prevalence of problem gambling in the adult population, and the socio-health implications of problem gambling in the province. The ultimate goal of this research is to provide information that will advise Saskatchewan Health and other allied agencies in the planning and development of prevention, education, treatment and subsequent research projects aimed at mitigating problem gambling in Saskatchewan.

In the 1993 study, the South Oaks Gambling Screen (SOGS) was imbedded in the survey questionnaire and the SOGS was scored to identify non-problem, problem, and probable pathological gamblers in Saskatchewan. Recently, Saskatchewan Health participated in an inter-provincial Canadian research project that sought to conceptualize, operationally define, and subsequently measure problem gambling in the general population. A major outcome from this research was the development and validation of a new measurement instrument—the Canadian Problem Gambling Index (CPGI)—and the present Saskatchewan problem gambling prevalence survey is guided by the new CPGI (Ferris, Wynne, & Single, 1999). By utilizing the CPGI, the present study identifies non-problem, low-risk, moderate risk, and problem gamblers in Saskatchewan and explores differences amongst these gambler sub-types.

The Canadian Centre on Substance Abuse (CCSA) in Ottawa conducted the three-year inter-provincial research project that resulted in the development of the CPGI, and the CCSA contracted with Saskatchewan Health to complete the present Saskatchewan gambling research project. Dr. Harold Wynne was the research team leader for the CPGI national research project and, on behalf of the CCSA, he was the principal investigator for this Saskatchewan problem gambling prevalence study. Evan Morris, a Regina researcher who has worked with Saskatchewan Health, served as the research project manager and Barbara Kahan of Kael Consulting in Regina provided professional statistical data analysis services to the project. Prairie Research Associates of Winnipeg was retained to conduct the telephone survey of adult Saskatchewan residents.

The focus of this study is two fold; that is, to describe the gambling practices of adult Saskatchewan residents and to gain insight into the issue of problem gambling behaviour in this population. This introductory chapter begins with a brief update of gambling changes in Saskatchewan since the 1993 gambling study was conducted. It then proceeds with a discussion of researching gambling and problem gambling, problem gambling as a public health issue, and concludes with a brief discussion of the *Measuring Problem Gambling in Canada* project, which resulted in the development of the problem gambling measurement instrument (the CPGI) utilized in this study.

1. Gaming in Saskatchewan Since 1993

1.1 Summary

As with the rest of Canada, Saskatchewan has seen significant changes to gaming in the province over the last ten years. In the early 1990s, gaming was widely available in the form of bingos, breakopen tickets, raffles, lotteries, and horse racing.

Electronic gaming was introduced in 1992 with the provincial VLT program. By the end of 1992, about 200 machines had been installed in approximately 70 sites in the southeast of the province. In the fall of 1993, when the survey for the initial problem gambling prevalence study was conducted, about 2300 machines were operational in approximately 500 sites throughout the province. As of March 31st, 2001, 3561 VLTs were located among 643 sites. The maximum number of VLTs that may operate in the province has been set by the government at 3600.

In 1993, casino gaming involved only table games play and was offered on a part-time periodic basis by seven exhibition associations (Lloydminster, Swift Current, Moose Jaw, Saskatoon, Regina, Prince Albert, and North Battleford). A total of 574 days of gaming were offered among these seven sites in 1993. In 1996, five fulltime commercial casinos were opened at which table game and slot machine play continues to be offered. The largest casino is located in Regina and operated by the Saskatchewan Gaming Corporation. The Saskatchewan Indian Gaming Authority operates casinos in North Battleford, Prince Albert, Yorkton, and on the White Bear First Nation. In 2001, in addition to the commercial casinos, the exhibition association in Saskatoon operates a fulltime casino with table games and VLTs, and the exhibition association in Moose Jaw operates a 4 day per week schedule, also with table games and VLTs.

Charitable gaming includes bingo, breakopen tickets, and raffles. Since 1993, the spending and net revenue generated by charitable gaming has declined about 10% overall. The largest decline in activity has been in breakopen ticket sales. Bingo spending has declined; however, industry restructuring has allowed the net proceeds to beneficiaries to be maintained. Since 1993, the number of fulltime (Class A) bingo halls has dropped through industry consolidation from 45 to 33. Raffle activity has grown; however, it remains the smallest part of the gaming market.

Horse racing continues to be available at the two main tracks, Marquis Downs on the Saskatoon Exhibition Association grounds, and Queensbury Downs on the Regina Exhibition Association grounds. The Yorkton Exhibition Association also hosts several days of racing each year. Wagering on horse racing declined approximately 13% from 1993 to 2001.

There were no major changes in lottery activity during the 1993 to 2001 period. Sales have remained steady however increasing expenses have meant a decline in the net proceeds to the beneficiaries. Table 1 provides a summary of gaming changes in Saskatchewan between 1993 and 2000.

Table 1
Types of Gaming in Saskatchewan Between 1993 and 2000

Types of Gaming	1993	2000
Bingo	Available	Available
Breakopens	Available	Available
Raffles	Available	Available
Lottery tickets	Available	Available
Exhibition associations	7 locations Table games 574 days of operation	2 locations Table games & 136 VLTs 500 days of operation
Commercial casinos	Not available	5 locations Table games & 1240 slots
Horse racing	Available	Available
Video lotteries	2300 machines 521 sites 352 communities	3561 machines 643 sites 321 communities

1.2 Background

Video Lottery Terminal Program

The Video Lottery Terminal (VLT) Program commenced in 1992. The border communities in the south-east of the province were targeted for the first installations as they had been affected by competition from VLTs in Montana and the Dakotas, drawing Saskatchewan residents out of the province. Using March 31st of each year, the distribution of VLTs has been as follows:

1993: 230 machines at 71 sites.
1994: 2,392 VLTs at 521 sites, in 352 communities
1995: 3,566, in 570 sites, in 320 communities.
1996: 3,472 at 613 sites, in 331 communities.
1997: 3,343, at 617 sites, in 334 communities.
1998: 3,578. At 627 sites, in 325 communities.
1999: 3,497, at 619 sites in 321 communities.
2000: 3,567, at 641 sites in 326 communities.
2001: 3,561, at 643 sites, in 321 communities.

VLTs may only be installed in age-restricted liquor-permitted premises where minors can neither play the machines nor watch them being played. Public advertising of VLTs is prohibited. The minimum number of machines at a site is two, and the maximum is 12.

In 1993/1994, provincial government revenue from the VLT program was approximately $23.3M, and site contractors earned about $5.3M. In 1999/2000, the VLT program generated $174M in revenue to the provincial government and $33M in revenue to the site contractors. The gross spent in 1999/2000 was $685.6M.

Casino Gaming

Exhibition associations operated part-time and special event casinos, with table games play only, prior to casino expansion in 1996. In 1993, seven exhibition associations offered casinos on an occasional basis. These were in Regina, Saskatoon, North Battleford, Lloydminster, Swift Current, Prince Albert, and Moose Jaw.

With the opening of the commercial style casinos, most of the exhibition associations discontinued their casinos. Two continue to operate casinos with VLTs and table games play (no slots). Moose Jaw Exhibition Association operates the Golden Nugget Casino four days per week with table games and 36 VLTs. Saskatoon Prairieland Exhibition Corporation operates the Emerald Casino seven days per week with table games and 100 VLTs. Other exhibition associations are eligible for 3 special event casino licences (up to one week each) per year. No special event license were issued in 2000.

In June 1994, the Province and the Federation of Saskatchewan Indian Nations (FSIN) entered into an agreement respecting the establishment of the Saskatchewan Gaming Corporation (SGC) to operate the casinos proposed for Regina and Saskatoon. In 1995, Saskatoon City rejected a casino in a plebiscite vote, which led to a second agreement with the FSIN allowing for four casinos to be operated by the Saskatchewan Indian Gaming Authority (SIGA) in other locations.

SGC opened Casino Regina on January 26, 1996, with 500 slots and table games. SGC also operated 120 slots at the Regina Exhibition grounds during 1996 and part of 1997. The slots were re-located to Casino Regina in 1997 when the Silver Sage Casino on the Regina Exhibition grounds closed.

The four SIGA casinos also opened in 1996: the Gold Eagle Casino in North Battleford, the Northern Lights Casino in Prince Albert, the Painted Hand Casino in Yorkton, and the Bear Claw Casino on the White Bear First Nation. SIGA initially opened with a total of 500 slots, and table games, across its four locations. This was increased in 1996 to equal SGC's 620 machines.

In 1999/2000, the net profit generated by the commercial casinos was $33M, and was distributed to the provincial government, the First Nations Fund, the Community Initiatives Fund (formerly the Associated Entities Fund), and Community Development Corporations. The total gross revenue at SGC and SIGA was $127M in 1999/2000. Exhibition casinos generated $2.4M for exhibition associations, compared to $4.7M in 1993. Government licensing fees from exhibition association casinos fell to $0.4M in 1999/2000, from $0.9M in 1993/1994.

Lotteries

In 1974, in compliance with the Criminal Code of Canada, the Saskatchewan government passed legislation which designated Sask Sport as the provincial marketing organization for lottery tickets. The operational aspects of lottery ticket sales are handled by the Western Canada Lottery Corporation (WCLC), a corporation owned by the provinces of Alberta, Saskatchewan, and Manitoba. Sask Sport is a non-profit corporation operating under the jurisdiction of the Minister of Culture, Youth and Recreation.

Lottery tickets are sold at authorized locations, mainly at convenience stores and shopping mall kiosks. The range of products sold has expanded from lottery tickets to include a variety of scratch-and-win offerings. In 1993/1994, lottery sales were $120M. Sales dipped in 1994/95 to $112M but recovered steadily over the next five years. Recently, sales appear to have plateaued, with sales in 1999/2000 at approximately $128M. Increased expenses have reduced the net available to sport, culture and recreation beneficiaries from $27M in 1993/1994 to $25M in 1998/1999. The licensing fee paid to the provincial government was $18M in 1993/1994 and $13M in 1998/1999.

Charitable Gaming

In 1970, amendments to the Criminal Code of Canada permitted the provincial government to make provisions for licensing gaming to raise proceeds for charitable or religious purposes.

The bingo industry grew during the 1980s. In 1993/1994, a restructuring of the bingo industry was necessary in order to comply with a Manitoba Court of Appeal interpretation of the Criminal Code of Canada. Management functions were transferred from private commercial bingo contractors to licensed charity associations. Since 1993, the number of bingo halls has declined from 45 to 33. In 1999/2000, the provincial government introduced an electronic bingo game through which players in bingo halls across the province are linked, allowing them to participate in the same game and offering a larger prize pool. Bingo spending has declined since 1993; however, industry restructuring and changes to the licensing fees charged by government have maintained the net revenue to beneficiaries.

The government first licensed raffles in 1978. Raffles sales increased 40% from 1993/1994 to 1999/2000.

The government has licensed breakopen tickets since 1982. Breakopen tickets are sold in bingo halls and in liquor-permitted premises. From 1993 to 2000, breakopen ticket sales dropped to 25% of previous sales levels. In 1998, after a one year test, vending machines for sale of breakopen tickets benefiting the Regina and Saskatoon Hospital Foundations were introduced, and have attracted some additional play. As of March 31, 2000, 112 of these machines were installed in the same age-restricted, liquor-permitted premises as had previously sold these breakopen tickets.

Changes to the licensing structure reduced the provincial government licensing fees on charitable gaming from $10.5M in 1993/1994, to $0.1M in 1999/2000. Table 2 compares the total amount spent and the revenue that accrued to charitable beneficiaries from these charitable gaming activities between 1993/1994 and 1999/2000.

TABLE 2
Charitable Spending and Revenue Between 1993 and 2000

Game	1993/1994 (in millions of dollars)	1999/2000 (in millions of dollars)
Bingo	Spend: $141.7 Revenue: $22.8	Spend: $118.8 Revenue: $23.3
Raffles	Spend: $18.8 Revenue: $7.1	Spend: $24.2 Revenue: $8.3
Breakopen tickets	Spend: $104 Revenue: $15.6	Spend: $33.2 Revenue: $6.6
TOTAL	Spend: $264.2 Revenue: $45.5	Spend: $176.3 Revenue: $38.1

Pari-mutuel Wagering (Horse Racing)

In 1969, amendments to the Criminal Code of Canada legalized pari-mutuel wagering on a year-round basis, and in 1989, teletheatre betting was legalized. The first Horse Racing Regulation Act in Saskatchewan was passed in 1965.

Live horse racing with pari-mutuel betting is currently offered at Queensbury Downs operated by the Regina Exhibition Association Limited, and at Marquis Downs operated by the Saskatoon Prairieland Exhibition Corporation. The Yorkton Exhibition Association also hosts horse racing for about one week each year. Simulcast and teletheatre betting are available at various locations in the province year-round.

Wagering on horse racing totalled about $18M in 1993/1994 and, in 1999/2000, was $13.8M. Approximately 90% of wagering on horse racing is on simulcast broadcasting of races from other Canadian and American tracks. Wagering on live horse racing in Saskatchewan has dropped from 27% of the total wagered in 1993/1994, to 9% in 1999/2000.

Against this backdrop of gambling developments over the past eight years in Saskatchewan, the discussion will now shift to a brief description of interest and developments in the field of gambling research, and in particular, to problem gambling prevalence studies that have been undertaken in North America.

2. Researching Gambling and Problem Gambling

Since antiquity, gambling in human societies has been ubiquitous. For a brief history of gambling, readers are referred to Robert Wildman's seminal book entitled *Gambling: An Attempt at an Integration* (1997). Wildman explores the early efforts of researchers to examine and explain human motivations for gambling. For instance, he notes that France (1902) postulated an evolutionary perspective "that during the proverbial hard times, such as a famine or natural calamity, only individuals who were willing to risk the adoption of new behavior and lifestyles were likely to survive" (Wildman, 1997, p.3). It follows from France's perspective that we are descendants of risk-taking man and that, therefore, "gambling" is ingrained in our very being. France's theory is merely cited to illustrate the early research interest in the latter part of the 19th century in studying and explaining man's propensity for gambling, and it does not suggest there is widespread endorsement for this evolutionary perspective. In fact, other researchers have posited different explanations for gambling, as noted by Wildman:

- Freud (1928) contributes the psychoanalytic viewpoint in his classic attempt to explore the causes of the Russian novelist Dostoevsky's excessive gambling.

- The sociologist Stocking (1930) posited that gambling is a continuation of primitive magical/religious ceremonies.

- Zola (1967) examined gambling as a focus of socialization. In a classic anecdotal account of men who gambled in a "lower class setting," he observed that only when gambling in a group were these men allowed to experience a sense of competence and respectability.

- Knapp (1976) relied on behavioral or learning theory to elaborate on the role of intermittent reinforcement in attracting and keep the gambler at play. In casinos, this included the use of (1) stimuli such as flashing lights, bells/music, and brightly colored symbols; and (2) response priming, through such devices as giving away free coins or offering free pulls on slot machines.

- Kusyszyn (1976) researched gambling as a form of adult play, and viewed this recreational pursuit as a normal, healthy and positive outlet for intelligent, inquiring adults.

As well as these early attempts by researchers to explain man's propensity for gambling, other research foci in the 20th century have included: (1) personalogical and individual factors relevant to gambling; (2) the mental and physical status of gamblers; (3) typologies of gamblers; (4) the demographics of gambling; (5) motivations for gambling; (6) the mathematics of gambling; (7) the societal implications of gambling; and (8) treatment of those with gambling problems (Wildman, 1997).

While it has long been recognized that some people have a problem with their gambling, it was not until the establishment of Gamblers Anonymous (GA) in Los Angeles in 1957 that a concerted effort was made to help treat so-called compulsive gamblers. In 1972, Dr. Robert Custer established the first inpatient treatment program for compulsive gamblers in North America at the Veteran Affairs (VA) hospital in Brecksville, Ohio. Dr. Custer's seminal book *When Luck Runs Out* (1985) is still considered a classic in the treatment of problem gambling. Since these earliest efforts to help individuals, research interest in compulsive or problem gambling has grown substantially.

Since the late 1980s, a major focus of problem gambling research in North America has been to determine the pervasiveness of this disorder in the general population. To this end, researchers in Canada and the United States have conducted numerous population surveys to ascertain the prevalence of problem gambling. In epidemiology, the term *prevalence* refers to the number of existing cases of a disease or health condition in a population at some designated time (Last, 1995). In contrast, the term *incidence* describes the rate of development of a disease or health condition in a group over a certain period of time. To date, there have been many epidemiological problem gambling prevalence studies conducted on populations in jurisdictions in Canada, the United States, and in other countries around the world. Interestingly, there has not been a single incidence study that tracks the development of new cases of a problem gambling disorder in a population over a designated time period. In their meta-analysis of disordered gambling prevalence studies in North America, Shaffer et al. (1997) lament this over-focus on prevalence studies and encourage researchers to begin conducting problem gambling incidence studies:

> It is time for the field of disordered gambling studies to conduct true incidence research by prospectively exploring the factors and circumstances that shift the scope and severity of disordered gambling in the United States and Canada. (p.66).

2.1 Prevalence Studies in Canada

The first gambling prevalence study ever conducted was the 1974 U.S. national survey undertaken by Kallick et al. (1979) for the Commission on the Review of the National Policy Toward Gambling (Volberg and Steadman, 1989). The first Canadian problem gambling prevalence study was conducted in Quebec by Robert Ladouceur (1991).

Since these earliest studies, there has been a proliferation of problem gambling prevalence research in both Canada and the United States. The Shaffer et al. (1997) meta-analysis of problem gambling prevalence studies in North America identifies 120 such studies that are subsequently included in the researchers' analysis. These studies are categorized according to population characteristics, state/province, instrument used, time frame, sample size, author, and year released. Readers are referred to the tables appended to the Shaffer et al. meta-analysis final report for more details of these prevalence studies.

The list below presents information on provincial-level gambling prevalence studies undertaken in Canada. There have been multiple studies undertaken in five provinces (British

Columbia, Alberta, Manitoba, New Brunswick, Nova Scotia), with the greatest number being conducted in Alberta (5 studies). The only true replication study was conducted in Alberta (Wynne Resources, 1998). A replication study is one that uses the same research design and methodology, including sampling respondents from the same population; using the same questionnaire and instrument(s); and using the same sample size. Replication studies provide more confidence when it comes to comparing changes in problem gambling prevalence rates over time.

It is evident from the list of prevalence studies that the South Oaks Gambling Screen (SOGS) has been used in every provincial problem gambling prevalence study conducted in Canada to date; in two adolescent studies, the SOGS-RA (Winters et al., 1993), which is a revision designed specifically for use with adolescents, is used. Although the SOGS is used to classify three gambler sub-types (i.e., non-problem, problem, and probable pathological gamblers), it is not possible to directly compare the combined prevalence rates amongst provinces because these studies: (1) examine different populations using differing sample sizes; (2) use different survey questionnaires; (3) word and score SOGS items somewhat differently; (4) experience differing response rates; and (5) utilize different survey administration protocols (e.g., training/supervising interviewers and completing call-backs). In view of these limitations, the prevalence rate data displayed in the list should be treated as being largely impressionistic, and readers are cautioned against making direct statistical comparisons amongst provinces.

With this caution in mind, some trends are apparent; notably, that the combined problem gambling prevalence rates are highest for both adolescent and Aboriginal populations. In the Alberta, Manitoba, and Nova Scotia adolescent prevalence studies, combined rates are significantly higher than those reported for the adult populations in any province; interestingly, the Alberta adolescent rate is substantially higher than the rates in Manitoba and Nova Scotia. The highest prevalence rate reported in any study is for Aboriginal adolescents in Alberta, where nearly half of the respondents allegedly have a gambling problem. Aboriginal adults in Alberta appear much less likely than Aboriginal adolescents in that province to have a gambling problem; however, the prevalence rate for Aboriginal adults is still substantially higher than for all other populations in Canada, except for non-Aboriginal adolescents in Alberta. It is very likely that these adolescent and Aboriginal problem gambling prevalence rates are over-estimates, having been influenced by the use of a classification instrument (SOGS) that has not been validated for use in either special population.

It should be noted that there have been other Canadian epidemiological problem gambling prevalence studies conducted within special populations, notably: (1) Quebec and Nova Scotia studies of college, high school, and primary school students (Ladouceur and Mireault, 1988; Gaboury & Ladouceur, 1998; Ladouceur, Dubé, & Bujold, 1994a, 1994b; Nova Scotia Department of Health, 1996); (2) Ontario studies of adolescents/adults in specific geographic regions (Insight Research, 1994; Govoni et al, 1996a, 1996b); (3) Ontario studies of treatment populations (Donwood, 1996); and (4) Ontario combined substance abuse/problem gambling/opinion surveys (Ferris & Stirpe, 1995; Smart & Ferris, 1996). Insofar as none of these studies are attempts to provide a definitive, baseline estimate of the prevalence of gambling in that province, they are not included in the list of provincial prevalence studies.

Province	Year Released	Combined Prevalence Rate*	Sample Size	Instrument	Author
Adult					
British Columbia	1994	3.9%	1200	SOGS	Gemini Research
British Columbia	1996	4.2%	810	SOGS	Angus Reid Group
Alberta	1994	5.4%	1804	SOGS	Wynne Resources
Alberta	1998	4.8%	1821	SOGS	Wynne Resources
Saskatchewan	1993	2.7%	1000	SOGS	Volberg
Manitoba	1993	4.2%	1212	SOGS	Criterion Research
Manitoba	1995	4.3%	1207	SOGS	Criterion Research
Ontario	1993	8.6%**	1200	SOGS	Insight Canada Research
Quebec	1991	3.8%**	1002	SOGS	Ladouceur
New Brunswick	1992	4.5%	800	SOGS	Baseline Marketing Research
New Brunswick	1996	4.1%	800	SOGS	Baseline Marketing Research
Nova Scotia	1993	4.7%	810	SOGS	Omnifacts Research
Nova Scotia	1996	5.5%	801	SOGS	Baseline Marketing Research
PEI	1999	3.1%	809	SOGS	Dorion & Nicki
Adolescent					
Alberta	1996	23%	972	SOGS	Wynne Resources
Manitoba	1999	11%	1000	SOGS-RA	Wiebe
Nova Scotia	1993	11.7%	300	SOGS	Omnifacts Research
Older Adult					
Manitoba	2000	2.8%	1000	SOGS	Wiebe
Aboriginal					
Alberta (adult)	2000	25%	500	SOGS	Auger & Hewitt
Alberta (adolescent)	1995	49%	961	SOGS-RA	Hewitt & Auger

* Combined prevalence rates include the number of respondents who score as either problem or probable pathological gamblers according to the SOGS.

** Only lifetime rates (percentages) are reported for the Quebec and Ontario studies; whereas, for all other studies, current rates (percentages) are shown. "Lifetime" questions ask whether the respondent has ever experienced a problem; whereas, "current" questions ask this only for the past 12 months.

2.2 Problem Gambling as a Public Health Issue

As early as 1994, and based on her studies of problem gambling prevalence in Massachusetts, Maryland, New Jersey, California, and Iowa, the eminent gambling researcher Rachel Volberg notes that problem gambling is an emerging public health issue. She states that:

> …data from surveys of gambling involvement in the general population and from treatment programs for pathological gambling raise serious public health concerns in relation to the proliferation of legalized gambling (1994, p.240).

Notwithstanding Volberg's early characterization of problem gambling as a public health issue, Harvard University researchers David Korn and Howard Shaffer lament, in a special issue of the Journal of Gambling Studies devoted to examining problem gambling from a public health perspective, that:

> …public health largely has been absent from the social and economic policy decisions surrounding the legalization and expansion of gambling. In addition, there has been little attention focused on gambling as a public health matter. This may be due to a lack of awareness, lack of interest, or a belief that this is not a matter appropriate for public health involvement (1999, p.298).

Korn and Shaffer acknowledge, however, that there is an emerging interest in addressing problem gambling within three public health areas, namely public policy, research, and public health practice, and they offer the following examples to support their observation (Korn & Shaffer, 1999, pp. 298-306):

Public policy

- In 1994, the American Medical Association adopted a resolution citing the addictive potential of gambling and called on states to set aside a fixed percentage of gambling revenues for education, prevention and treatment (American Medical Association, 1994).

- The Canadian National Council of Welfare published a report in 1996 that recommended restrictions on certain types of gambling (National Council of Welfare, 1996).

- In 1998, the Canadian Council of Churches, representing eighteen Christian denominations, wrote the federal Minister of Justice urging the establishment of an independent review of the impact of province-sponsored gambling in Canada.

- In 1993, the Canadian Public Health Association identified gambling as a public health issue by adopting a formal resolution at its annual general meeting seeking funds to coordinate a national health impact assessment of regulated gambling in Canada, but its efforts were subsequently unsuccessful. In 1999, a second CPHA resolution related to the impact of VLTs was approved.

Research

- Between 1977 and 1997, there were 152 prevalence studies reported in Canada and the United States, with more than half of these completed after 1992 (Shaffer, Hall & Vander Bilt, 1997).

- In 1999 the National Opinion Research Center published the second national problem gambling prevalence study in the United States (Gerstein et al, 1999). To date, there is only one published prospective longitudinal study of disordered gambling incidence, and this was not the primary purpose of this research (Cunningham-Williams, Cottler, Compton, & Spitznagel, 1998).

- Korn and Shaffer conducted a review of the gambling-related literature in public health journals and they identified only 18 articles. At the time of their literature review, the Canadian Public Health Association Journal had not published any article focusing on gambling. It should be noted that, in 2001, David Korn published what appears to be the first article in a Canadian medical/health journal (Canadian Medical Association Journal) that discusses problem gambling as a public health issue (Korn, 2001).

Public health practice

- The first community-based initiatives in public awareness concerning the risks of gambling and the existence of a medical condition called "compulsive gambling" were promulgated through non-public health organizations beginning in 1972 with the founding of the National Council on Problem Gambling in the United States and in Canada in 1983 with the Canadian Foundation on Compulsive Gambling.

- In Canada, the first public expenditures for gambling-related health services were made in New Brunswick during 1993 to fund its help line services. Currently, all ten Canadian provinces allocate money for gambling treatment.

- In Mississauga, a Canadian Medical Officer of Health proposed community criteria which local governments must meet before introducing video lottery terminals (VLTs) (Cole, 1998).

- In Atlantic City, a major destination casino resort participates in the Healthy Cities Project, an international public health movement that it joined in 1993. (Anthony, 1998).

- In Prince Edward Island, a group of family doctors successfully persuaded the provincial government to remove VLTs from convenience stores.

- At the federal level, Health Canada has yet to show a strong interest in gambling but has changed its addiction program name to Alcohol, Drugs and Dependency Issues to acknowledge the existence of gambling addiction.

- Neither the American nor Canadian Public Health Associations have identified gambling as an established public health interest category.

The Canadian Public Health Association has recently redressed this last lament of Korn and Shaffer. As their first resolution in 2000, the CPHA adopted the position paper entitled *Gambling Expansion In Canada: An Emerging Public Health Issue* (www.cpha.ca/english/policy/resolu/2000s/2000/page1.htm). Dr. David Korn and Dr. Harvey Skinner of the Department of Public Health Sciences, University of Toronto, developed this position paper, and it includes the following description of the value of viewing problem gambling from a public health perspective:

> There is considerable value in adopting a public health perspective on gambling. It offers a broad viewpoint on gambling in society – not solely a focus on problem and pathological gambling. This is similar to the approach taken in alcohol studies. A public health approach emphasizes prevention and harm reduction strategies to address gambling-related problems and to decrease the adverse consequences of gambling behaviour. It addresses not only the risk of problems for the gambler but also the quality of life of families and communities affected by gambling. It embodies public health values that reflect concern for the impact of gambling expansion on vulnerable, marginalized and at-risk population groups. A public health position recognizes that there are both costs and benefits associated with gambling. By appreciating the health, social and economic dimensions of gambling, public health professionals can develop strategies that minimize gambling's negative impacts while recognizing its potential benefits. (p.3)

With this resolution, the Canadian Public Health Association is prepared to play a leadership role in engaging policy makers, researchers and health practitioners in "minimizing gambling's negative impacts while balancing its potential benefits" (p.5). To facilitate this role, the position paper recommends that the CPHA take the following four action steps:

1. Endorse the position that expansion of gambling in Canada has significant health and public policy impacts. CPHA should take a leadership role in the national debate; position gambling as part of a new public health thrust that addresses quality of life issues for individuals, families and communities; and establish a mechanism/interest group within CPHA to support this function.

2. Adopt the following ***goals*** to provide a focus for public health action and accountability:
   a. ***Prevent*** gambling-related problems in individuals and groups at risk of gambling addiction.
   b. ***Promote*** balanced and informed attitudes, behaviours and policies towards gambling and gamblers both by individuals and by communities.
   c. ***Protect*** vulnerable groups from gambling-related harm.

3. Convene a public health ***think tank*** on gambling. This would bring together participants from, for example, the gambling industry, addictions, education, public health and population health fields. The forum could focus on public health concerns – including the impact on vulnerable groups – and build momentum for an action agenda.

4. Advocate for a ***national public policy review*** of gambling expansion that analyzes the effectiveness of our public ownership and accountability framework, studies the

> Canada-wide prevalence of problem and pathological gambling, and assesses associated health and socioeconomic costs/benefits. (p.5)

There is great promise in addressing problem gambling from a public health perspective, and it is evident that through organizations such as the Canadian Public Health Association that Canada is in the avant-garde of this movement. There was even earlier recognition in Canada of the merit of this public health perspective when the Canadian provinces embarked on a national research project to re-conceptualize and measure problem gambling, and the discussion now turns to a brief description of this important initiative as it relates directly to the Saskatchewan study.

3. Measuring Problem Gambling in Canada

In Canada, the emerging interest in examining problem gambling from a public health perspective has been embraced by a growing number of addictions specialists, health professionals, and senior policy makers from government health departments, non-government organizations, and community agencies. In September 1996, a group of these professionals from different provinces met in Winnipeg to discuss problem gambling research, treatment, and prevention in Canada. There was a common concern expressed that with labels such as "pathological gambling," research and treatment in this field has been over-focused on addressing this so-called addiction from a medical perspective. There was consensus amongst the inter-provincial group that, while there is an acknowledged clinical condition that may be referred to as pathological gambling, the issue of problem gambling in a community context has a far broader impact and is less well understood.

To redress this dominant medical perspective that focuses on the individual problem gambler, an inter-provincial steering committee was formed at the Winnipeg meeting and this group was charged with the tasks of (1) drafting a position paper that re-conceptualized problem gambling within a community health context; (2) developing an operational definition of problem gambling that could be used to guide future community-based research; and (3) developing and validating an instrument that could be used in epidemiological health studies of problem gambling in the general population. Each province contributed funding or other support to what became a three-year national research project (1997-2000) that was titled *Measuring Problem Gambling in Canada* (Ferris, Wynne, & Single, 1999). The Canadian Centre on Substance Abuse in Ottawa undertook this research challenge on behalf of the inter-provincial steering committee, and the research team of Dr. Harold Wynne, Jackie Ferris, and Dr. Eric Single completed this project in two phases.

In Phase I, the team conducted an extensive review of the problem gambling literature, including theoretical underpinnings, conceptual frameworks and models, competing definitions and labels, and instruments utilized to identify problem gambler sub-types. With feedback from an international panel of expert problem gambling researchers and program specialists, the study team developed: (1) an integrated conceptual framework to guide community-based studies of problem gambling; (2) an operational definition of problem gambling; and (3) a draft measurement instrument entitled the Canadian Problem Gambling Index (CPGI). In Phase II of

the study, the research team further refined the CPGI questionnaire items and ultimately determined its validity and reliability in a national study of 3,120 adult Canadians.

It is beyond the scope of this discussion to describe the *Measuring Problem Gambling in Canada* findings and readers may view and download the Phase I and II final reports, as well as the Users Manual for the CPGI, from the Canadian Centre on Substance Abuse web site (www.ccsa.ca). However, as the Canadian Problem Gambling Index (CPGI) is utilized in the Saskatchewan study, it is appropriate to briefly describe this new instrument.

Canadian Problem Gambling Index

A main goal of the *Measuring Problem Gambling in Canada* inter-provincial research project was to develop a new instrument that would accurately identify and classify non-problem, at-risk, and problem gamblers in the general population. Heretofore, instruments such as the South Oaks Gambling Screen and DSM IV manual diagnostic criteria for "pathological gambling" were mainly used in general population gambling prevalence studies, notwithstanding that these measures were validated on clinical populations of problem gamblers. The research task became one of developing and validating a new instrument that could be used in surveys of non-clinical populations; that is, within the general public in Canadian communities.

In developing the CPGI, the research team considered theories and models that have been used to explain problem gambling, and reviewed various measures that have been developed to identify problem gamblers and those who are at risk for developing a gambling problem. The instruments reviewed included the following: South Oaks Gambling Screen, and its derivatives (SOGS-R, SOGS-RA, SOGS-Plus); the American Psychiatric Association's DSM III and IV for classifying pathological gamblers; Massachusetts Gambling Screen (Shaffer et al., 1994); Gamblers Anonymous 20 questions; Cumulative Clinical Signs Measure (Culleton, 1989); Life Areas Problem Measure (Ferris and Stirpe, 1995; Smart and Ferris, 1996); and other measures developed by individual researchers (i.e., Compulsive Gambling Signs and Progression Slide Rule (Massachusetts Council on Compulsive Gambling, 1994); Addiction Severity Index (Lesieur and Blume, 1992); Pathological Gambling Signs Index (Ladouceur and Mireault, 1988; Lesieur and Klein, 1987); and various clinical assessment interview protocols (Taber, 1985; Laventhol & Horwath et al., 1986).

The 20-item South Oaks Gambling Screen (SOGS) and its derivatives are the most widely used screening instruments and it is the SOGS that was used in the 1993 Saskatchewan gambling prevalence study. There have been significant criticisms of the SOGS, including:

- It was developed in a clinical population, and yet is used in general population studies (Lesieur and Blume, 1993).

- It is inappropriate for establishing prevalence rates as it results in a low predictive value for the SOGS given the very low rate of occurrence of the disorder in the general population (Culleton, 1989).

- In general population surveys, the SOGS results in a high number of false positives (Culleton, 1989; Abbot and Volberg, 1992; Dickerson, 1993).

- In his meta-analysis of gambling prevalence studies, Shaffer et al. (1997) found that the SOGS provided significantly higher estimates of gambling problems than the DSM criteria.

In developing the CPGI, the research team carefully considered these criticisms of the SOGS and of the other instruments reviewed. The team then content-analysed each of these instruments to identify domains and variables that each purported to measure and, based on this analysis, specific domains, variables and items (i.e., survey questions) were incorporated into the first draft of the CPGI. This draft was subsequently shared with an international panel of gambling research experts for their comments and, when this was completed, the CPGI was further modified and then pilot-tested with three groups (i.e., a general population random sample, regular gamblers who responded to newspaper ads, and problem gamblers in treatment).

Following the pilot-testing phase, the 31-item CPGI was tested in an English/French national general population survey on a sample of 3,120 adult Canadians drawn from all provinces. To test the reliability of the new instrument, the CPGI was re-administered to a sample of 417 respondents from the initial survey. Finally, to further validate the classification accuracy of the CPGI, problem gambling clinicians conducted clinical interviews with 143 survey respondents.

As a result of this validation research project, the CPGI is the first gambling measurement instrument to have been subjected to rigorous testing prior to being utilized in community-based gambling research projects. Moreover, it is the only problem gambling measurement instrument to have established and published psychometric properties before being used in gambling research projects (these psychometric properties may be reviewed in the User Manual developed by Ferris and Wynne, 2001 – www.ccsa.ca).

The Canadian Problem Gambling Index is the instrument that is utilized in this survey of adult gambling and problem gambling in Saskatchewan. Modifications and enhancements to the CPGI for this survey are described in the methodology section of this report.

CHAPTER II

RESEARCH DESIGN

1. Purpose and Objectives

The purpose of this research is to examine gambling and problem gambling amongst Saskatchewan adults from a community health perspective. The goal of the research is to describe the current scope and characteristics of gambling and problem gambling within the adult population in Saskatchewan.

To achieve this purpose and goal, the following research objectives have been posited:

1. To describe and compare the demographic characteristics of adult Saskatchewan non-gamblers and gambler sub-types (i.e. non-problem, low risk, moderate risk, problem gamblers).

2. To describe and compare the gambling activities of adult Saskatchewan gambler sub-types (i.e. non-problem, low risk, moderate risk, problem gamblers).

3. To describe and compare problem gambling behaviour and consequences for adult Saskatchewan gambler sub-types (i.e. non-problem, low risk, moderate risk, problem gamblers).

4. To describe and compare the health status of adult Saskatchewan gambler sub-types (i.e. non-problem, low risk, moderate risk, problem gamblers).

5. To compare present Saskatchewan research findings with results from the 1993 Saskatchewan prevalence study.

6. To offer conclusions and discuss implications that may assist Saskatchewan Health and allied agencies in designing or modifying treatment, prevention, and education programs that will help address problem gambling.

2. Methodology

The research design is a descriptive survey of adult Saskatchewan residents' (i.e. 19 years-of-age and older) gambling participation, problem gambling behaviour and consequences, and related personal health status. A telephone survey methodology is employed to garner information from a large, province-wide sample of Saskatchewan residents (N=1,848) and statistical data are presented and discussed in this report.

2.1 Research Questions

To guide this inquiry and to achieve the study objectives, the following research questions are posed:

1. What is the demographic profile of gambler sub-types (i.e. non-gamblers, non-problem gamblers, low-risk gamblers, moderate-risk gamblers, problem gamblers)?

2. How does type of gambling activity, frequency/duration of time spent at play, expenditures, and motivation to gamble compare amongst gambler sub-types?

3. What are the characteristics and consequences of problem gambling behaviour amongst gambler sub-types?

4. How do personal health status indicators compare amongst gambler sub-types?

5. How do findings from this study compare with those presented in the October, 1993 Saskatchewan gambling study entitled *Report on the Social Impacts of Gaming and the Impact of Gaming Expansion on Charitable Beneficiaries?*

2.2 Telephone Survey

In this study, a random sample of 1,848 Saskatchewan adults 19 years-of-age and older were interviewed by telephone. Prairie Research Associates Inc. (PRA) of Winnipeg, Manitoba conducted this telephone survey in April and May 2001. Appendix 1 contains the full methodology report prepared by PRA, including (a) how the research was conducted, (b) issues that were encountered and addressed during the telephone interviewing process, and (c) the survey questionnaire that was utilized. Two different methods for calculating the survey response rate are presented, and the second method, which is the standard for community surveys, indicates the response rate is 59.7%. The margin of error for the sample is ±2.3% at the 95% confidence level (i.e., accurate nineteen times out of twenty).

The sample of 1,848 Saskatchewan adults was drawn from across the province and stratified geographically and by gender according to the 1996 census as follows:

Region of Province (N=1,848)	Region %	Gender %
Regina (N= 355)	19.2%	
Females		9%
Males		10%
Saskatoon (N=384)	20.8%	
Females		11%
Males		10%
Small cities (N=324)	17.5%	
Females		7%
Males		10%
Towns and Rural Communities (N=785)	42.5%	
Females		26%
Males		17%

2.3 Questionnaire

The questionnaire that was developed for this Saskatchewan survey is based on the 31-item Canadian Problem Gambling Index (CPGI) that is described in the introduction. The Saskatchewan instrument includes 48 items (exclusive of demographic questions), clustered within the four dimensions of the CPGI as displayed in Table 3. Some items not included in the 31-item CPGI were added to the Saskatchewan instrument; furthermore, some of the 31 CPGI items were excluded from the Saskatchewan instrument. A list of the CPGI items excluded from the Saskatchewan instrument, and of the new non-CPGI items included in the Saskatchewan instrument, is displayed in Table 4.

TABLE 3
Saskatchewan Gambling and Problem Gambling Questionnaire Items

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
Gambling Involvement	Type	Gambling activities	1. In the past 12 months, have you bet or spent money on (list of 20 gambling activities)?
	Frequency	Frequency of play	2. In the past 12 months, how often did you bet or spend money on (list activity: daily, weekly, monthly, yearly)?
	Duration	Time at play/type/session	3. When spending money on (list activity), how many minutes/hours do you normally spend each time?
	Expenditure	Money wagered monthly	4. How much money, not including winnings, did you spend on (list activity) in a typical month?
		Largest amount wagered	5. In the past 12 months, what is the largest amount of money you ever spent on (list activity) in any one day?
	Co-participants	Gambling companions	6. When you spend money on (list activity), who do you go with?
	Motivation	Reasons for gambling	7. What are the main reasons why you spend money on (list activity)?
	Loss of control	Bet more than could afford	9. How often have you bet more than you could really afford to lose?
		Bet or spent more than wanted to	22. How often have you bet or spent more money than you wanted to on gambling?
	Motivation	Increase wagers	10. How often have you needed to gamble with larger amounts of money to get the same feeling of excitement?

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
Problem Gambling Behavior	Chasing	Returning to win back losses	11. How often have you gone back another day to try to win back the money you lost?
	Borrowing	Borrow money or sold anything	12. How often have you borrowed money or sold anything to get money to gamble?
	Lying	Lied to family members or others	21. How often have you lied to family members or others to hide your gambling?
		Hiding evidence	19. How often have you hidden betting slips, lottery tickets, gambling money, IOUs or other signs of betting or gambling from your partner, children or other important people in your life?
	Illegal acts	Theft	27. How often have you stolen anything or done anything else illegal such as write bad cheques so that you could have money to gamble?
	Problem recognition	Felt problem	13. How often have you felt that you might have a problem with gambling?
		Wanted to stop, didn't think could	18. How often have you felt like you would like to stop betting money or gambling, but you didn't think you could?
		Unable to quit	23. How often have you tried to quit, or cut down on your gambling but were unable to do it?
		Escape	20. How often have you gambled as a way of escaping problems or to help you feel better when you were depressed?
Adverse Consequences	Personal Consequences	Negative health effects	16. How often has gambling caused you any health problems, including stress or anxiety?
			24. How often have you had difficulty sleeping because of gambling?
			25. How often have you felt irritable or restless when you tried to cut down or stop gambling for a while?
		Criticism	14. How often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?
		Feelings of guilt	15. How often have you felt guilty about the way you gamble or what happens when you gamble?
	Social Consequences	Financial problems	17. How often has your gambling caused any financial problems for you or your household?
		Family problems	26. How often has your gambling caused any problems between you and any of your family members or friends?
		Lost relationship	28. How often have you almost lost a relationship, a job, or an educational or career opportunity because of your gambling?
	Household Impact	Illegal offense	31. Has anyone in your household been charged with committing an illegal offence in order to obtain money to gamble?
		Fired from job	32. Has anyone in your household been fired from a job because of problems related to gambling?
		Separated or divorced	38. Has anyone in your household been separated or divorced because of problems related to gambling?
		Belongings repossessed	39. Has anyone in your household had belongings repossessed because of financial problems related to gambling?
		Bankruptcy	40. Has anyone in your household had to declare bankruptcy because of financial problems related to gambling?
		Left children unattended	33. How often has anyone in your household left children under the age of 12 unattended in vehicles or at home in order to gamble?
		Social assistance	34. How often has anyone in your household received financial assistance from a government or community social assistance program because of financial problem related to gambling?
		Food bank	35. How often has anyone in your household received food from a food bank or other food program because of financial problems related to gambling?
		Serious arguments	36. How often has anyone in your household been involved in a serious argument, shouting match or threats of violence over gambling?
		Physical attacks	37. How often has anyone in your household been involved in physical attacks or assault over gambling?

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
		Missed bill payments	41. How often have problems related to a household member's gambling resulted in not paying (list of household bill payments)
Problem Gambling Correlates	First experiences	Age first gambled	29. How old were you when you first gambled?
	Family problems	Family gambling problem	30. Has anyone in your family ever had a gambling problem?
	Health status	Health problems	42. Right now, do you have any of the following health problems (list of health conditions)
	Alcohol use	Frequency	43. In the past 12 months, how often did you drink beer, wine, liquor or other alcoholic beverages?
		Amount	44. How many drinks do you usually have on one occasion?
	Illegal drug use	Frequency	45. In the last 12 months, how often did you use illegal drugs?
	Depression	Long-term depression	46. During the past 12 months, was there ever a time when you felt sad, blue, or depressed for two weeks or more in a row?
		Medication	47. During this time, did you take medication or antidepressants?
	Suicide	Suicide ideation	48. Have you ever seriously thought about committing suicide?
		Suicide attempts	49. Have you ever attempted suicide?

Note: In Table 3, the item numbers are not in ascending sequence, but rather, they correspond with the actual item numbers in the survey questionnaire in Appendix 1.

TABLE 4
New Non-CPGI Items Included and CPGI Items Excluded from the Saskatchewan Survey Instrument

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
			New non-CPGI Items Added
Gambling Involvement	Co-participants	Gambling companions	6. When you spend money on (list activity), who do you go with?
	Motivation	Reasons for gambling	7. What are the main reasons why you spend money on (list activity)?
			New non-CPGI Items Added
Problem Gambling Behaviour	Lying	Hiding evidence	19. How often have you hidden betting slips, lottery tickets, gambling money, IOUs or other signs of betting or gambling from your partner, children or other important people in your life?
	Illegal acts	Theft	27. How often have you stolen anything or done anything else illegal such as write bad cheques so that you could have money to gamble?
	Problem Recognition	Unable to quit	23. How often have you tried to quit, or cut down on your gambling but were unable to do it?
		Escape	20. How often have you gambled as a way of escaping problems or to help you feel better when you were depressed?
			New non-CPGI Items Added
Adverse Consequences	Personal Consequences	Negative effects on health	24. How often have you had difficulty sleeping because of gambling?
			25. How often have you felt irritable or restless when you tried to cut down or stop gambling for a while?
	Social Consequences	Family problems	26. How often has your gambling caused any problems between you and any of your family members or friends?
		Lost relationship	28. How often have you almost lost a relationship, a job, or an educational or career opportunity because of your gambling?
	Household Impact	Illegal offense	31. Has anyone in your household been charged with committing an illegal offence in order to obtain money to gamble?
		Fired from job	32. Has anyone in your household been fired from a job because of problems related to gambling?
		Separated or divorced	38. Has anyone in your household been separated or divorced because of problems related to gambling?
		Belongings repossessed	39. Has anyone in your household had belongings repossessed because of financial problems related to gambling?

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
		Bankruptcy	40. Has anyone in your household had to declare bankruptcy because of financial problems related to gambling?
		Left children unattended	33. How often has anyone in your household left children under the age of 12 unattended in vehicles or at home in order to gamble?
		Social assistance	34. How often has anyone in your household received financial assistance from a government or community social assistance program because of financial problem related to gambling?
		Food bank	35. How often has anyone in your household received food from a food bank or other food program because of financial problems related to gambling?
		Serious arguments	36. How often has anyone in your household been involved in a serious argument, shouting match or threats of violence over gambling?
		Physical attacks	37. How often has anyone in your household been involved in physical attacks or assault over gambling?
		Missed bill payments	41. How often have problems related to a household member's gambling resulted in not paying (list of household bill payments)
			New non-CPGI Items Added
	First experiences	Age first gambled	29. How old were you when you first gambled?
Problem Gambling Correlates	Health status	Health problems	42. Right now, do you have any of the following health problems (list of health conditions)
	Alcohol use	Frequency	43. In the past 12 months, how often did you drink beer, wine, liquor or other alcoholic beverages?
		Amount	44. How many drinks do you usually have on one occasion?
	Illegal drug use	Frequency	45. In the last 12 months, how often did you use illegal drugs?
			CPGI Items Excluded
	Family problems	Family alcohol/drug problem	x. Has anyone in your family ever had an alcohol or drug problem?
	Co-Morbidity	Gamble, drugs, alcohol	x. In the last 12 months, have you used alcohol or drugs while gambling?
		Gamble when high	x. In the last 12 months, have you gambled while drunk or high?
	Problem recognition	Felt alcohol/drug problem	x. In the last 12 months, have you felt you might have an alcohol or drug problem?
Problem Gambling Correlates	Relieve pain	Self-medication (gambling, drinking or drug use)	x. If something painful happened in your life did you have the urge to gamble?
			x. If something painful happened in your life did you have the urge to have a drink?
			x. If something painful happened in your life did you have the urge to use drugs or medication?
	Stress	Treated for stress	x. Have you been under a Dr's care because of physical or emotional problems brought on by stress?
	Faulty cognition	Due for a win after losses	x. After losing many times in a row, you are more likely to win?
		Having a winning system	x. You could win more if you use a certain system or strategy?

Note: In Table 4, the item numbers are not in ascending sequence, but rather, they correspond with the actual item numbers in the survey questionnaire in Appendix 1.

An examination of Table 4 shows that the Saskatchewan instrument retained most of the 31 items in the CPGI. Ten of the 31 CPGI items were discarded and these items measure six variables considered to be linked to problem gambling (i.e. family alcohol problems, co-morbidity of concurrent gambling/alcohol/drug use, alcohol/drug problem recognition, gambling/drinking/drug use to relieve pain, treatment for stress, and faulty cognition). The exclusion of these CPGI items does not invalidate the Saskatchewan instrument as none are scored to identify gambler sub-types (i.e. non-problem, low risk, moderate risk, problem gamblers); moreover, other items that measure some of these variables (i.e. family gambling

problem, alcohol and illegal drug use, and recognition of a gambling problem) remain in the Saskatchewan instrument.

Finally, the Saskatchewan survey instrument adds new items that strengthen the scope of the inquiry, notably in the "adverse consequences" and "problem gambling correlates" dimensions of the CPGI. For instance, a series of 11 items that tap the impact of gambling on the household have been added. Similarly, a checklist of health problems has been added to determine and compare the relative health status of gambler sub-types. Examining these new prospective problem gambling correlates will not only provide important information for Saskatchewan health planners, but it will add to the "correlates pool" of the CPGI, thus advancing the further development of this Canadian instrument.

2.4 Identifying Gambler Sub-Types

The central task in all problem gambling prevalence studies conducted in Canada, the United States, and in countries throughout the world is to first identify gambler sub-types according to the severity of their gambling problem. In these surveys of the general population, it is imperative to be able to differentiate people who do not have a gambling problem from those who clearly do, or who are at heightened risk for developing a problem. To accomplish this task, various problem gambling screening instruments have been utilized in problem gambling prevalence research over the past two decades and these instruments have been briefly presented and discussed in the introductory section of this report.

As stated previously, the newly developed Canadian Problem Gambling Index (CPGI) is the instrument that forms the basis for the Saskatchewan survey questionnaire that is used to collect data in this study. Within the 31-item CPGI, nine items form a sub-scale that has been named the Problem Gambling Severity Index (PGSI), and the PGSI discriminates four gambler sub-types, namely: non-problem gamblers, low risk gamblers, moderate risk gamblers, and problem gamblers. The nine PGSI items that are scored are presented in Table 5.

TABLE 5
Scored Items that Discriminate Gambler Sub-Types

Dimension	Variables	Indicators	PGSI Scored Items
Problem Gambling Behaviour	Loss of control	Bet more than could afford	9. How often have you bet more than you could really afford to lose?
	Motivation	Increase wagers	10. How often have you needed to gamble with larger amounts of money to get the same feeling of excitement?
	Chasing	Return to win back losses	11. How often have you gone back another day to try to win back the money you bet?
	Borrowing	Borrow money or sold anything	12. How often have you borrowed money or sold anything to get money to gamble?
	Problem recognition	Felt problem	13. How often have you felt that you might have a problem with gambling?
Adverse Consequences	Personal consequences	Criticism	14. How often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?
		Negative health effects	16. How often has gambling caused you any health problems, including stress or anxiety?
		Feelings of guilt	15. How often have you felt guilty about the way you gamble or what happens when you gamble?
	Social consequences	Financial problems	17. How often has your gambling caused any financial problems for you or your household?

The response scale score for each of the nine PGSI items is as follows: score 1 for each response of "sometimes," 2 for each "most of the time," and 3 for each "almost always." Based on this method, a total score of between 0 and 27 points is possible for each survey respondent, and the cut-point scores for each of the gambler sub-types is as follows:

PGSI Score	Gambler Sub-Type
0	Non-problem gambler
1-2	Low risk gambler
3-7	Moderate risk gambler
8 and over	Problem gambler

The non-problem gambler group is further separated into gamblers and non-gamblers as these sub-types have quite different characteristics. Throughout this report, statistical data are presented for each of these four gambler sub-types to compare and contrast the responses of each, for the purpose of providing insight into the nature and characteristics of problem gambling in Saskatchewan.

2.5 Data Analysis

During each telephone interview, Prairie Research Associates Inc. directly entered responses into a computer program, and this electronic data was subsequently converted into a statistical file utilizing the Statistical Package for the Social Sciences (SPSS v.10) computer program. When the survey was complete, PRA cleaned the SPSS data file of any input errors, categorized and coded open-ended and multiple responses, and emailed the final SPSS file to

Barbara Kahan of Kael Consulting and Evan Morris of EcoTech Research in Regina for subsequent analysis.

The Regina consultants analysed the statistical data using SPSS according to a framework provided by Dr. Wynne, the principal investigator, and this analysis mainly included calculating frequency distributions and cross-tabulations by gambler sub-type for each of the survey items. Chi-square tests of statistical significance were computed and these are displayed, along with frequency distributions, in tables in the results section of this report.

Data are presented in tables in the results section, and this information is typically displayed as the number and percentage of respondents who fall within a particular cell. In some cases, the percentage for a group of cells does not total 100% due to rounding or some missing data (e.g., respondents answering, "don't know" or "refused to answer" to some of the questions).

2.6 Definition of Terms

A number of gambling-related terms are used throughout this report and the following definitions are provided to describe the meaning attached to these.

Gambling

The definition of "gambling" adopted for this study comes from the sociologist Devereux (1979), who suggests that gambling means wagering money or other belongings on chance activities or events with random or uncertain outcomes. This definition is supported in the Webster's Encyclopedic Unabridged Dictionary (1996) where gambling is defined as "to stake or risk money or anything of value on the outcome of something involving chance."

In colloquial usage, gambling often refers to many day-to-day activities or circumstances people find themselves in. For instance, it is frequently said that farming, marriage, changing jobs, or venturing outside in a lightning storm constitutes a "gamble." While this is true, gambling on games of chance specifically designed to allow the punter to risk his or her money is clearly a different form of gambling. In this situation, the "game" has been set up specifically to allow the gambler to risk money or valuables on a random occurrence, whether pure luck (e.g. VLTs) or a modicum of skill (e.g. poker) is involved. In contrast, farming is not a game or event that is set up for the sole purpose of allowing the farmer to risk money or valuables, notwithstanding that farming is truly a risky business. In this study, respondents are asked to relate their experiences relative to gambling on these "games" that are specifically set up to allow them to risk their money against the hope of winning more. In this sense, gambling at roulette in a casino is viewed as gambling, whereas, farming is not.

Problem Gambling

This study incorporates the following definition of problem gambling that was adopted by the Canadian Interprovincial Steering Committee as part of the development of the Canadian Problem Gambling Index:

> *Problem gambling* is gambling behaviour that creates negative consequences for the gambler, others in his or her social network, or for the community. (*Measuring Problem Gambling in Canada,* p.57)

This is an operational definition of problem gambling that is useful for guiding community-based research in general population studies. The definition prescribes that research must seek (a) to identify "problem behaviour" associated with gambling activity, and (b) to determine the negative consequences of that behaviour, for the individual, his/her family, friends, and co-workers and for the community-at-large. In this sense, the definition steers away from the traditional medical or clinical definitions, which are fixated on understanding the etiology of this disordered condition and treating the individual. While the individual remains the unit of analysis in this new definition, the focus includes not only the problem gambler, but the effects his/her behaviour has on others. In this way, responsal interventions may not only be targeted at the problem gambler, but at his/her family, social group, and at the community as a whole.

Gambler Sub-Types

Public health research relies on the science of epidemiology, which has as its first main goal the identification of bona fide "cases" of a condition (e.g. tuberculosis, small pox, AIDS) in a human population. In this vein, problem gambling prevalence studies have all sought to identify true cases of problem gambling in various human populations, and various screening instruments have been utilized to accomplish this (see the discussion in the introduction). Researchers have chosen different labels for categories of cases (e.g. non-problem, at-risk, problem, pathological, Level 1,2,3) and this has caused confusion in the field as it is often difficult to compare studies because gambler sub-type "cases" are often defined and labeled differently. This study adopts the Canadian Problem Gambling Index as it methodological framework; consequently, the gambler sub-types are labeled and defined as follows:

PGSI Score	Gambler Sub-Type	Description
0	Non gambler	Respondents in this group have not gambled at all in the past 12 months, and will have been skipped through the majority of the questionnaire, with the exception of the correlates section. Non-gamblers may have some of the correlates of problem gambling. This information is important in the context of long-term tracking, in that the correlates may predict those who were once or may become gamblers or problem gamblers.
0	Non-problem gambler	Respondents in this group will have responded "never" to most of the indicators of behavioral problems, although there may well be a frequent gambler with heavy involvement in terms of time and money. The "professional" gambler would fit into this category. This group probably will not have experienced any adverse consequences of gambling. Again, the information on correlates here is important for comparative purposes, and would be particularly useful in long-term tracking.
1-2	Low risk gambler	Respondents in this group will have responded "never" to most of the indicators of behavioral problems, but will have one or more sometimes or more often responses.

		Gamblers may be at risk if they are heavily involved in gambling and if they respond positively to at least two of the correlates of problem gambling. This group likely will not have experienced any adverse consequences from gambling.
3-7	Moderate risk gambler	Respondents in this group will have responded "never" to most of the indicators of behavioral problems, but will have one or more "most of the time" or "always" responses. Gamblers may be at risk if they are heavily involved in gambling and if they respond positively to three or four of the correlates of problem gambling. This group may or may not have experienced adverse consequences from gambling.
8 and over	Problem gambler	Respondents in this group are those who have experienced adverse consequences from their gambling, and may have lost control of their behavior. Involvement in gambling can be at any level, but is likely to be heavy. The correlates may be useful here in profiling capacity, as one would anticipate that this group would respond positively to more of the correlates than members of other groups, on average.

2.7 Limitations

The margin of error for the total sample of 1,848 respondents is ±2.3% at the 95% level; that is, when the entire sample is considered, results are accurate within ±2.3% nineteen times out of twenty. This margin of error can be deceiving, as the error margin for smaller sub-samples within the study population is typically larger. For instance, in the results section, percentages are displayed for the four gambler sub-types that have been identified through the CPGI; for each of these sub-types, the margin of error is larger than for the overall sample, with the most significant error being for the "problem gambler" sub-type, due to the small number of respondents in this group (N=23). To help the reader interpret the sub-group percentages in this report vis-à-vis the margin of error, the following table and explanation of its use is provided.

Percentage	**Total Sample** (N=1,848)	**Non-Gamblers** (N=248)	**Gamblers** (N=1600)	**Non-Problem Gamblers** (N=1,320)	**Low-Risk Gamblers** (N=171)	**Moderate-Risk Gamblers** (N=86)	**Problem Gamblers** (N=23)
95%	1.0%	2.7%	1.1%	1.2%	3.3%		
90%	1.4%	3.7%	1.5%	1.6%	4.5%	6.3%	
85%	1.6%	4.4%	1.7%	1.9%	5.4%	7.5%	
80%	1.8%	5.0%	2.0%	2.2%	6.0%	8.5%	16.3%
75%	2.0%	5.4%	2.1%	2.3%	6.5%	9.2%	17.7%
70%	2.1%	5.7%	2.2%	2.5%	6.9%	9.7%	18.7%
65%	2.2%	5.9%	2.3%	2.6%	7.1%	10.1%	19.5%
60%	2.2%	6.1%	2.4%	2.6%	7.3%	10.4%	20.0%
55%	2.3%	6.2%	2.4%	2.7%	7.5%	10.5%	20.3%
50%	2.3%	6.2%	2.5%	2.7%	7.5%	10.6%	20.4%
45%	2.3%	6.2%	2.4%	2.7%	7.5%	10.5%	20.3%
40%	2.2%	6.1%	2.4%	2.6%	7.3%	10.4%	20.0%
35%	2.2%	5.9%	2.3%	2.6%	7.1%	10.1%	19.5%
30%	2.1%	5.7%	2.2%	2.5%	6.9%	9.7%	18.7%

Percentage	Total Sample (N=1,848)	Non-Gamblers (N=248)	Gamblers (N=1600)	Non-Problem Gamblers (N=1,320)	Low-Risk Gamblers (N=171)	Moderate-Risk Gamblers (N=86)	Problem Gamblers (N=23)
25%	2.0%	5.4%	2.1%	2.3%	6.5%	9.2%	17.7%
20%	1.8%	5.0%	2.0%	2.2%	6.0%	8.5%	16.3%
15%	1.6%	4.4%	1.7%	1.9%	5.4%	7.5%	
10%	1.4%	3.7%	1.5%	1.6%	4.5%	6.3%	
5%	1.0%	2.7%	1.1%	1.2%	3.3%		

Example: The percentage of non-problem gamblers who play VLTs is 14.8% (refer to Table 20). To find the confidence interval, look under the non-problem gambler column, and find the percentage closest to 14.8%. In this case the closest % is 15%. The confidence interval is approximately then 14.8% plus or minus 1.9%.

For problem gamblers, the percentage who play VLTs is 78.3% (refer to Table 20). The closest value in the table is 80%. The confidence interval is approximately 78.3% plus or minus 16.3%.